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SOCIOECONOMIC ASSESSMENT  
PROPOSED EXPANSION OF THE  
HAUSER DAM HYDROELECTRIC  
PLANT MISSOURI RIVER, MONTANA

Recreation Survey

FINAL REPORT

Submitted to:

Montana Power Company  
40 East Broadway  
Butte, Montana

June 1982



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## 1.0 INTRODUCTION

This study is part of a baseline inventory and impact assessment of existing social and economic conditions in the vicinity of Hauser Dam in Lewis and Clark County, Montana. The socioeconomic assessment was prepared to support a license application being made by the Montana Power Company to the Federal Energy Regulatory Commission for a permit to expand the electrical generating capacity of the Hauser Dam and Power Plant on the Missouri River near Helena, Montana. The recreational survey was conducted to provide detailed measurements of the amount and type of recreational activity conducted at Hauser Lake, the dam site, and adjacent areas along the Missouri River.

### 1.1 Study Area

Hauser Lake is part of a large recreational area extending along the Missouri River in west central Montana. The study area for the recreation survey consists of the five counties nearest this area: Lewis and Clark, Broadwater, Jefferson, Silver Bow, and Cascade (see Figure 1-1). This area includes the three major population centers nearest Hauser Lake as well as the rural areas adjacent to the Missouri River impoundments. The population of the five-county area was 172,123 in 1980.



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STUDY AREA FOR HAUSER DAM EXPANSION RECREATION SURVEY





## 2.0 METHODOLOGY

A mail survey of study area residents was selected as the most efficient method of reaching people likely to have visited Hauser Lake or adjacent portions of the Missouri River. Questionnaires were mailed to 2,000 area residents on May 14, 1982. A follow-up mailing went out to 1,388 residents on June 2, 1982. By June 16, 1982, when the survey was terminated, 846 questionnaires had been completed and returned, of which 836 questionnaires were usable for analytical purposes.

### 2.1 Questionnaire Design

The primary purpose of the questionnaire was to elicit data on the relative frequency with which study area residents visit Hauser Lake and the adjacent portions of the Missouri River; what they usually do during their visits; and what specific sites in the area are most often chosen for particular activities. Questions were also asked about respondents' age, sex, family composition, income, and education, so that any association between these variables and preferences for activities or sites could be evaluated.

The recreation area of which Hauser Lake is a part consists of the Missouri River and its impoundments between Townsend, Montana and Holter Dam, near Wolf Creek, Montana (see Figure 2-1). This stretch of river is approximately 60 miles long. It includes five impoundments or lakes (Canyon Ferry, Hauser, Lake Helena, Upper Holter, and Holter) and is bordered by large tracts of public land as well as private holdings. Public campgrounds and picnic areas are maintained in the area by the Montana Department of Fish, Wildlife, and Parks (DFWP), the U.S. Bureau of Land



Management, and the U.S. Forest Service.

To accommodate the area's diverse recreational opportunities, the questionnaire was organized around four geographic subdivisions and twenty types of recreational activity. (See Appendix A for a facsimile of the questionnaire.) Respondents were asked separately about the number of times in the past two years they had visited each of the four subareas (Canyon Ferry, the Hauser Lake area, Holter Lake, and Upper Holter Lake, including the Gates of the Mountains), and the usual length of these visits. Next, they were given a list of twenty activities and asked to indicate how often in the past two years they had gone to this stretch of the Missouri for the purpose of participating in each one.

The list of recreational activities was adapted from a list used by DFWP in its 1979 telephone survey of Montana residents' recreational attitudes and activities (Wallwork et al. 1980). It includes all the activities reported by 25 percent or more of DFWP's Montana sample, plus others (e.g., prospecting, trapping) suggested by DFWP officials (personal communication, Pacini 1982).

Respondents could not be assumed to be familiar with the entire Townsend-Holter stretch of the Missouri River, nor could they be expected to share a common set of names for specific sites. To clarify for respondents what was meant by each of the geographic subdivisions and to provide a graphic means of indicating exactly where they had been, the map included in this report as Figure 2-1 was inserted in each questionnaire. Particular attention was focussed on the Hauser Lake area by outlining that part of the map in red ink. For each of the activities they reported, respondents were asked first to write in the general area



they had usually visited for that purpose, then to mark the map to show the specific location.

Respondents who had visited the Hauser Lake area were also asked to rate existing facilities there -- picnic areas, campgrounds, swimming beaches, fishing access, restrooms, parking lots -- and indicate where they thought improvement was most needed. Space was provided for additional comments on the management of the Hauser Lake area.

Eight questions at the end of the questionnaire asked the respondent to indicate his or her age, sex, marital status, number and ages of children, annual household income, education, and favorite recreational activities.

A two-year frame of reference was used for all the questions that dealt with recreation. The two-year time period was intended to encourage respondents who had not visited the area recently to think back to earlier visits, thus maximizing the amount of information elicited about recreational activity in the Hauser Lake area.

## 2.2 The Sample

Because one purpose of the survey was to ascertain the relative frequency with which residents of the region visit the Hauser Lake and adjacent areas, it was necessary to sample the general population, rather than a specialized subpopulation such as fishing license holders. The most complete list of the general population available is the telephone directory. In 1978, an estimated 95 percent of Montana households had telephone service (U.S. Department of Commerce 1980, p. 585). A telephone directory is also desirable because it usually lists households, not



individuals, which makes it possible to avoid including representatives of a single household more than once.

Not every household is listed in a telephone directory, of course. Aside from the problem of unlisted numbers, which are less common in rural areas (Dillman 1978), the directory is always somewhat out of date. People who have moved into a service area recently are not included, and those who moved after the directory was printed are listed with wrong addresses.

Households in the five-county area are represented in the Mountain Bell directories for Butte (Silver Bow County and southern Jefferson County); Helena (most of Lewis and Clark County, northern Jefferson County, and Broadwater County); and Great Falls (most of Cascade County); and in the Three Rivers Telephone Co-op Directory for Augusta, Fairfield, Fort Shaw, Simms, Sun River, Stockett, and Sand Coulee. All four of these directories were published in the spring or summer of 1981.

Sample size was set at 2,000, to allow for the possibility that as many as 20 percent of the directory addresses could be out of date yielding a lower questionnaire return rate. The survey was designed to ensure a minimum return of 400 usable questionnaires.

Each of the five counties was assigned a share of the sample in proportion to its share of the 1980 population (see Table 2-1). The appropriate number of names for each county was obtained by taking every 27th listing in the Great Falls and Three Rivers directories, every 27th listing in the Butte directory, and every 36th listing in the Helena directory. If the designated listing was a business, or a name with no specific address (e.g., "Helena"), the next listing was





substituted. If the listing included two names, the first one was used.

### 2.3 Procedure

Questionnaires were mailed in 9-inch by 6-inch envelopes. Each envelope contained a folded questionnaire, a map, a postage prepaid return envelope, and a cover letter signed by the president of Western Analysis, Inc. (see Appendix B). First-class postage was used on the mailing envelope, so that it would be forwarded, if necessary.

The first mailing was preceded by a pretest of the questionnaire, conducted in the study area. The purpose was to check the content of the questionnaire and test the telephone directories for the percentage of wrong addresses that might be expected.

Questionnaires were mailed to 2,000 people on May 14th, with 1,388 follow-up questionnaires mailed on June 2nd. As a result of the two mailings, 846 completed questionnaires were received, and 180 names were discarded for lack of a valid address. In other words, 46.5 percent of the 1,820 people known to have valid addresses (or whose questionnaires were forwarded successfully by the Post Office) completed and returned questionnaires. Ten of the 846 questionnaires were discarded because they were returned blank by the widow of the addressee, leaving 836 questionnaires to be processed. These questionnaires are the data base for the results reported in the next section.



TABLE 2-1  
ALLOCATION OF ORIGINAL SAMPLE

	POPULATION (1980)		SAMPLE
	Number	Percent	Number
Cascade County	80,696	46.9	938
Lewis and Clark County	43,039	25.0	500
Silver Bow County	38,092	22.1	442
Jefferson County	7,029	4.1	82
Broadwater County	3,267	1.9	38
Total	172,123	100.00	2,000

Source: Western Analysis, Inc.



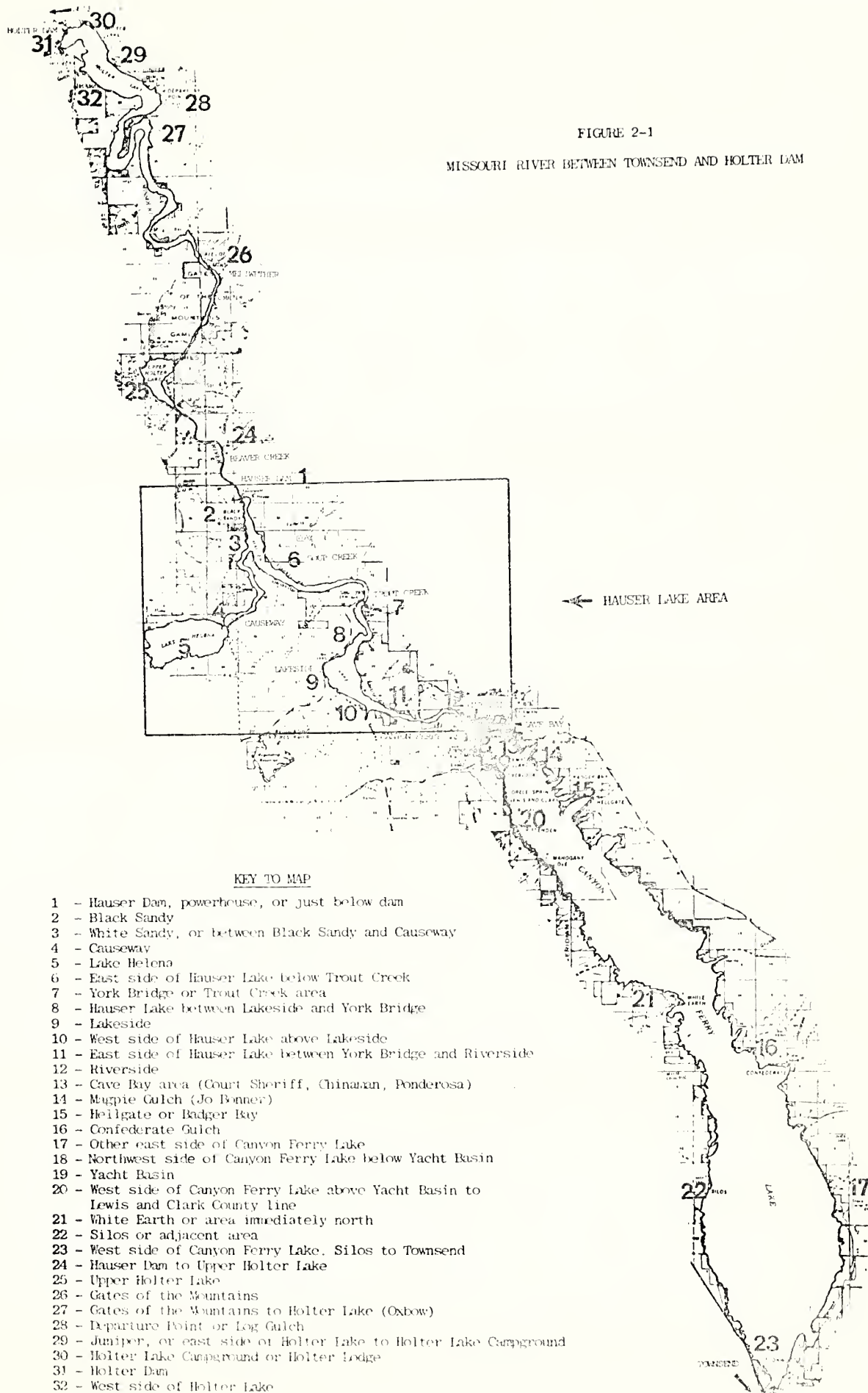


FIGURE 2-1

MISSOURI RIVER BETWEEN TOWNSEND AND HOLTER DAM



### 3.0 RESULTS

#### 3.1 Characteristics of Respondents

The people who returned the questionnaire lived in each of the five counties in about the same proportion as the total population of the area (compare Table 2-1 with Table 3-1): 46 percent lived in Cascade County; 27 percent, in Lewis and Clark; 19 percent, in Silver Bow; and 6 percent, in Broadwater and Jefferson counties.

A large majority of respondents were men (601 of the 776 who answered the demographic questions), partly because married couples' telephone listings were generally in the husband's name, and partly because some of the more popular (e.g., fishing) recreational activities in the Missouri River area are done more often by men than by women.

Respondents were older, as a group, than the adult population of the state. Twenty percent were 65 or older, compared with 15 percent of the state's adult population (age 18 or older) in 1980. Only 6 percent were ages 18 to 25, compared with 19 percent of the state's adult population. Again, this is a consequence of using telephone directories for the sample. Table 3-2 shows that women in the sample were more likely than the men to be 65 or older, a likely consequence of women's longer life expectancy.

Nearly a third of the respondents were college graduates (Table 3-3), compared with 22 percent of DFWP's statewide sample (Wallwork 1980, p. 154). The percentage of respondents who did not complete high school was the same (13 percent) in both surveys, however. College graduates proved to be similar to other respondents with respect to





areas visited, though they were more likely to report having participated in certain activities (see Section 3.3).

Despite the large number of college graduates in the sample, household income was not much higher than had been reported for DFWP's statewide sample in 1979. Table 3-4 shows that 14 percent of the five-county sample reported an income of \$35,000 or higher, compared with 12 percent of the DFWP sample (Wallwork 1980). Seventeen percent of the five-county sample, compared with 20 percent of the DFWP sample, reported an income less than \$10,000. These differences are due to the effects of inflation during the three years that elapsed between the DFWP survey and the five-county survey, and to the fact that most people in the five-county survey live in cities. Urban residence is associated with a higher average income.

A comparable survey, conducted annually by Mountain Bell Telephone Company, showed that in 1981 the distribution of Montana telephone customers by age and income was not very different from the distribution of respondents in the 1982 survey described here. Thirty-one percent of the Mountain Bell customers were 55 or older, compared with 37 percent of survey respondents, but approximately one-third of both samples reported an annual household income of less than \$15,000 (Mountain Bell Telephone Company 1981).

Respondents raising children were expected to differ from others in their recreational activities and possibly in the sites chosen for specific activities. Respondents who said they had any children under 20 were assumed to be active parents, whose recreational activities would be influenced



by their children. Forty percent of the sample were in this category (Table 3-5). Most of the active parents were married. About 60 percent had two or three children; 20 percent, one child; and 21 percent, four or more. Active parents were younger than other respondents: 71 percent were under 45, compared with 60 percent of non-parents and 3 percent of people whose children were all 20 years old or older (Table 3-6). None of the active parents were over 65, compared with 43 percent of non-parents and 24 percent of people with adult children.

### 3.2 Visits to Missouri River Areas

All but twenty-six respondents answered the first two questions in the questionnaire: the first asked them to check their county of residence, the second, whether they had visited the Hauser Lake area (as defined on the map included with the questionnaire) in the past two years. Of the 810 people responding to these questions, more than two-thirds (69 percent) had visited at least one of the four areas (Hauser Lake area, Canyon Ferry, Upper Holter Lake, and Holter Lake), and about one-fifth (19 percent) had visited all four. Two-fifths (40 percent) had visited the Hauser Lake area; one-half (50 percent) had visited Canyon Ferry. Most of the people who had visited the Hauser Lake area had also visited Canyon Ferry.

Table 3-7 shows a strong association between county of residence and area visited. Lewis and Clark County residents were almost three times as likely as Cascade, Broadwater, and Silver Bow County residents to have been to the Hauser Lake area, while Cascade County residents were much more likely than anyone else to have been to Holter Lake. Canyon Ferry was visited by proportionately more people than any of the other three areas.



Lewis and Clark County residents were apt to be frequent visitors, to both Canyon Ferry and the Hauser Lake area, while the more distantly located Silver Bow and Jefferson residents had visited less often (Table 3-8). More than a third of the Lewis and Clark residents who had been to the Hauser Lake area at all had done so at least twelve times in two years, compared with only 11 percent of Silver Bow residents and none of the Jefferson County residents. Canyon Ferry was the area visited most often by respondents generally; Upper Holter Lake, the area visited least often. The majority of people from the more distant counties had visited Upper Holter only once. Cascade County residents were most likely to have been frequent visitors at Holter Lake, but only 20 percent had been there as often as twelve times.

Canyon Ferry visitors were more likely to spend the night than visitors to other areas. Forty-one percent reported two or more days as their "longest visit" to Canyon Ferry in the past two years, compared with 34 percent of visitors to the Hauser Lake area and 36 percent of visitors to Holter Lake (see Table 3-9). But only 25 percent of Canyon Ferry visitors, and 22 percent of Hauser Lake area visitors, reported a "usual" visit of two or more days. Table 3-9 shows that Lewis and Clark County residents spent the night at either Hauser Lake or Canyon Ferry much less often than Silver Bow and Cascade County residents did.

Fifty-eight respondents owned or leased a cabin or land in the Townsend-Holter area; fifty of these respondents were Lewis and Clark County or Cascade County residents. For ten Lewis and Clark residents and two Cascade residents, this property was the permanent residence. Table 3-10 gives the general location of the Missouri River property owned or leased by respondents from each of the five counties.



Missouri River property owners were somewhat better off than other respondents -- 46 percent reported an annual household income of \$25,000 or more, compared with 34 percent of those who did not own property in the area -- and they were more likely to be frequent visitors. There were not enough of them, however, to account for the association between income and education, on the one hand, and visits to the Missouri River areas, on the other (Table 3-11). Visits to all areas were more common among people with an income over \$25,000 and among college graduates. People under 65, and people with children under age 20, also were more likely to have visited the river in the past two years.

Regardless of income, education, age, or family status, respondents tended to report more visits to Canyon Ferry than to the other Missouri River areas. For certain activities, however, people preferred the Hauser Lake area to Canyon Ferry. These patterns are described in Sections 3.3 and 3.4.

### 3.3 Activities Reported for Each Area

Twenty activities were listed in the questionnaire, and respondents were asked to indicate how often they had visited the Townsend-Holter stretch of the Missouri River for each one. About 34 percent of the respondents said they had not visited this stretch of the river at all, or if they had, they did not answer the questions about activities at the river.

For the remaining 546 respondents, the most popular activities were fishing and picnicking (see Table 3-12). Over two-thirds reported fishing from shore or dock; over half, fishing from a boat; nearly half, picnicking, and about a third, sightseeing. (Most people reported more than one activity.) Substantial minorities -- 20 percent or more







-- reported ice fishing, water skiing, swimming, camping with a recreational vehicle (RV), and boating for purposes other than water skiing or fishing.

Among the people who reported any participation at all, relatively few had visited the river for that purpose more than a few times in the two-year period. Fishing from shore was an exception: 35 percent of those reporting any participation had done so at least twelve times during the two years. Fishing from a boat, water skiing, and wildlife observation were done that often by at least 20 percent of participants, but for the other popular activities, most people had visited the area not more than three times (Table 3-12).

The eleven activities reported by more than eighty respondents (15 percent of those who answered Question 7) are marked with an asterisk in Table 3-12. Areas and specific sites within areas will be discussed for these activities only.

A single area was indicated by a majority of participants for only one of the commonly-reported activities -- swimming. Fifty-three percent of the 169 people who reported swimming said that they usually visited Canyon Ferry for that purpose (Table 3-13). For all activities except fishing from shore, the Hauser Lake area was indicated by fewer people than Canyon Ferry was. Holter Lake was visited by 37 percent of shore fishermen, compared with 31 percent who visited the Hauser Lake area and 27 percent who visited Canyon Ferry.

Canyon Ferry was the area usually visited by over 40 percent of ice fishermen, water skiers, and RV campers. For these activities and for most of the others, the Hauser Lake area



was indicated by about 20 percent of participants. For sightseeing and walking or hiking, the largest proportion of visitors went to Upper Holter Lake. (Note that the percentages in Table 3-13 maximize the relative importance of the Hauser Lake area for each of these activities, because respondents who indicated both Hauser Lake and Canyon Ferry for boating, for instance, were coded as Hauser Lake area visitors and not as Canyon Ferry visitors.)

Although respondents generally seemed to prefer Canyon Ferry to Holter Lake and the Hauser Lake area for most activities, Cascade County participants showed a strong tendency to prefer Holter Lake to all other areas for the activities listed in Tables 3-13 and 3-14. Nearly all of them reported that they usually had visited Holter Lake for shore fishing and for ice fishing, and a majority usually had visited Holter Lake for eight of the remaining nine popular activities (Table 3-14).

Lewis and Clark County participants were much less likely to report visits to Holter Lake (Table 3-14). Visits to Upper Holter Lake for sightseeing, walking or hiking, and observing wildlife were reported by about a third of Lewis and Clark County participants. For other activities, these respondents showed a tendency to prefer Canyon Ferry Lake, but this was not a strong tendency except for swimming and RV camping. For fishing from shore, a majority (61 percent) of Lewis and Clark County participants reported that they usually had visited the Hauser Lake area, and they also reported more visits to the Hauser Lake area than to Canyon Ferry for sightseeing, walking or hiking, and observing wildlife.

Silver Bow County participants definitely preferred Canyon Ferry to all other areas for all of the popular activities



(Table 3-14). Very few had visited Holter Lake, and only 25 percent reported that they usually had visited the Upper Holter Lake area for sightseeing, or for walking or hiking. Even for shore fishing, only 26 percent of Silver Bow County participants usually had visited the Hauser Lake area, while two-thirds had visited Canyon Ferry.

Only a few Jefferson and Broadwater County residents had visited the Missouri River areas for the activities listed in Table 3-14, but those who had almost all reported that they usually had visited Canyon Ferry:

In short, proximity to an area, rather than the nature of the activity, seemed to govern visitors' destinations. Even for ice fishing, swimming, and water skiing -- activities for which participants from Silver Bow and Lewis and Clark preferred Canyon Ferry -- the majority of Cascade County participants usually had gone to Holter Lake.

Participants from the other four counties rarely visited Holter Lake, though sizeable minorities had gone to the Upper Holter Lake area (including Gates of the Mountains) for sightseeing or hiking. The Hauser Lake area, accessible by vehicle only from Helena or East Helena, was visited most often by Lewis and Clark County people. Some fishermen from Silver Bow and Jefferson counties also reported visits to the Hauser Lake area, but less often than they reported fishing at Canyon Ferry Lake.

Older respondents were less likely than others to report some activities (water skiing, swimming, camping), and the youngest respondents (age 17-24) were less likely to report fishing. Age did not seem to affect the choice of area visited, however. Table 3-15 shows no consistent tendency



for participants in any age group to report that they usually had visited a particular area. The youngest participants (age 17-24) were less likely than others to report that they usually had visited the Hauser Lake area, and more likely to report that they usually had visited Holter Lake, but the number of participants in this age group was too small to support a reliable conclusion. (Note that Cascade County residents, who were most likely to report that they usually had visited Holter Lake, were no more likely to be under 25 than the residents of the other four counties.)

People with children under 20 were more likely than others to report fishing from a boat, water skiing, swimming, and picnicking in the Missouri River areas covered by the questionnaire. People whose children were adults were least likely to report water skiing, swimming and picnicking. Among participants, parents of children under 20 were more likely to choose Holter Lake for fishing from a boat, hiking and observing wildlife, and the Upper Holter Lake area for sightseeing, than others (Table 3-16). They were somewhat more likely than others to go to Holter Lake for swimming, and less likely to go to Canyon Ferry, and they were more likely to go to the Hauser Lake area for shore fishing and ice fishing, and less likely to go to Canyon Ferry. Most of the differences in Table 3-16 are larger and more consistent than the age differences shown in Table 3-15. They suggest a tendency for childless adults -- some much younger, some much older than active parents -- to prefer Canyon Ferry for swimming, picnicking, and water skiing, while families with children prefer Holter Lake and the Hauser Lake area for fishing, and the Holter Lake area for other activities.

Participation rates for some of the activities were also associated with education and income. College graduates







generally were more likely than people who had not attended college to have visited the river for picnicking, sightseeing, walking, observing wildlife, and all the water-based activities except shore fishing. People with postgraduate or professional training, however, were less likely than college graduates to report any activity except hiking or observing wildlife. For picnicking, sightseeing, and water-based activities other than fishing, participation rates ranged from 40 to 50 percent of college graduates to 8 to 30 percent of people who had not graduated from high school.

People with an annual household income of \$20,000 or more (60 percent of all respondents) were more likely than others to report any activity involving a boat, but income was not related to the percentages who reported fishing, picnicking, camping, sightseeing, hiking, or observing wildlife.

Differences among both income groups and between college graduates and others, with respect to the area visited for a particular activity, were neither large nor consistent. Among the factors covered by the questionnaire, county of residence and family status had the most to do with preference for a particular area.

### 3.4 Specific Sites within Areas

Respondents were asked to indicate, by marking the map shown in Figure 2-1, exactly where they had gone for each of the activities checked in Questions 7 and 8. From half to three-quarters of those who checked any activities did mark the map, and they did so clearly enough to make it possible to code their responses. The others either did not use the map at all, or did so in such a way that it was difficult to



identify specific locations. Figure 2-1 shows which sites were coded, and Table 3-17 shows the distribution of sites indicated by participants in all the activities listed on the questionnaire. Some sites were combined with others in Table 3-17, to avoid an excessive number of entries showing very low levels of use.

When activities are considered separately, certain patterns emerge. For shore fishing, Holter Dam is the most popular area, with 38 participants, followed by Log Gulch on Holter Lake and Hauser Dam, with 27 participants apiece. Black Sandy Recreation Area (S.R.A.), the Causeway, certain sites on the west side of Canyon Ferry and on the northeast shore of Holter Lake were also popular, with 14 to 19 participants apiece. For boat fishing, Black Sandy S.R.A. (or the lower end of Hauser Lake) was indicated most often, followed closely by the Yacht Basin on Canyon Ferry Lake. Popular areas for ice fishing were the Silos on Canyon Ferry, with 23 participants, the Causeway, with 15, and the Holter Lodge area on Holter Lake, with 14. For swimming, people were more likely to indicate the northeast shore of Canyon Ferry Lake (Court Sheriff, Ponderosa, Cave Bay, Magpie Gulch, Hellgate) than any other area, though the northwest shore of Canyon Ferry was indicated by 17 people, and Lakeside, by 11. Twenty-six people indicated Cave Bay, Magpie Gulch, or Hellgate for water skiing, far more than indicated any other site. Black Sandy S.R.A. was mentioned for picnicking more often than any other single site, but the Cave Bay-Hellgate area as a whole was mentioned most often. The same sites were mentioned most often for camping, too. The Gates of the Mountains was the area mentioned most often for hiking or walking and for observing wildlife or watching birds.

Within the Hauser Lake area, the most heavily used sites are Hauser Dam and the nearby Black Sandy S.R.A. These



sites are used primarily for fishing. The Causeway and Riverside are also popular for fishing, though less so than Hauser Dam or Black Sandy. Black Sandy is used for picnicking, camping, and water skiing, more than any other site in the Hauser Lake area. The Causeway is the only site in the Hauser Lake area that was mentioned often for ice fishing. The Lakeside area was mentioned more often for swimming than any other site in the Hauser Lake area, but somewhat less often than Black Sandy for water skiing.

### 3.5 Facilities in the Hauser Lake Area

About two-thirds of the respondents who had been to the Hauser Lake area rated existing facilities in the area, as requested by Questions 11 and 12. Using a scale of 1 ("Outstanding") to 5 ("Poor"), a third of the respondents rated restrooms 4 or 5, and 22 to 28 percent assigned a rating of 4 or 5 to parking, picnic areas, and campgrounds (Table 3-18). Other facilities were viewed more favorably.

Silver Bow County residents were most likely to be critical of restrooms in the area, but relatively few of them were critical of other facilities (Table 3-18). Lewis and Clark County residents were most likely to assign a negative rating to picnic areas, campgrounds, and swimming beaches.

For all facilities except parking, about half of those who assigned a rating of 4 or 5 indicated that Black Sandy S.R.A. was the area most needing improvement. Most of the others did not write in a specific location. Sixteen of the sixty-eight respondents who saw a need for improved parking referred to Black Sandy S.R.A., six, to Hauser Dam, and eighteen did not designate a specific location.



### 3.6 Favorite Outdoor Recreation

At the end of the questionnaire, respondents were asked to indicate which of the list of twenty items were their family's "favorite outdoor recreational activities," and where they had gone for each one, "most often" during the past two years. Almost three-quarters of the respondents answered this question.

The most popular activity was fishing from shore (62 percent of respondents), followed by fishing from a boat (47 percent) and picnicking (36 percent). People with children under 20 were also likely to report swimming (40 percent) and hunting (42 percent) (Table 3-19). Childless respondents were more likely than others to report backpacking and camping without a recreational vehicle (RV), but less likely to report fishing, camping with an RV, and observing wildlife. Participation rates for people with adult children were generally low, except for fishing.

For fishing, water skiing, boating, and swimming, most respondents indicated that they had gone most often to the Missouri River, including areas downstream from Holter Dam (for respondents who lived in Cascade County). The Missouri River areas were popular for river floating, picnicking and camping with a recreational vehicle, too, especially for people from Cascade and Lewis and Clark Counties. Silver Bow County residents were more likely to mention Georgetown Lake and the Big Hole River, for shore fishing, picnicking, and camping.





### 3.7 Conclusion

Hauser Lake and Hauser Dam are evidently popular fishing spots for Lewis and Clark County residents, but residents of neighboring counties -- Cascade, Jefferson, Broadwater and Silver Bow -- go more often to Holter Lake or Canyon Ferry Lake to fish. For other water-based recreation, and for camping, hiking, and observing birds or wildlife, area residents evidently prefer Canyon Ferry Lake, Holter Lake, and the Upper Holter/Gates of the Mountains area.

Improvements now under way at Black Sandy S.R.A. may increase the popularity of the area for picnicking and camping, but the most important determinant of use seems to be distance. Because the Hauser Lake area can be reached only by unpaved roads, and because it is farther than other parts of the Missouri River from Great Falls, Butte, and Townsend, it is used primarily by Helena-area residents who want to fish from the shore. For these residents, however, the Hauser Lake area is a valued resource, preferred to any other part of the Townsend-Holter Dam stretch of the Missouri River.



TABLE 3-1  
DISTRIBUTION OF RESPONDENTS BY COUNTY OF RESIDENCE

	NUMBER <sup>a</sup>	PERCENT
Cascade	373	46
Lewis and Clark	222	27
Silver Bow	151	19
Jefferson	37	4
Broadwater	18	2
Other	12	2
Total	813	100

<sup>a</sup>Excludes 23 respondents who did not report county of residence.

Source: Western Analysis, Inc.



TABLE 3-2  
AGE AND SEX OF RESPONDENTS<sup>a</sup>

	MEN		WOMEN		ALL	
	Number	Percent	Number	Percent	Number	Percent
17-24	26	4	22	13	48	6
25-34	151	25	28	16	179	23
35-44	116	19	24	14	140	18
45-54	100	17	21	12	121	16
55-64	98	16	33	19	131	17
65-74	80	13	19	17	109	14
75 and older	30	5	18	10	48	6
Total	601	100	175	100	776	100

<sup>a</sup>Excludes 60 respondents who did not answer Questions 13-19.

Source: Western Analysis, Inc.



TABLE 3-3  
DISTRIBUTION OF RESPONDENTS BY EDUCATION

	NUMBER <sup>a</sup>	PERCENT
8th grade or less	35	5
Some high school	62	8
High school graduate	182	24
Some college or vocational training	234	31
College graduate	123	16
Postgraduate or professional training	125	16
Total	761	100

<sup>a</sup>Excludes 60 respondents who did not answer any demographic items and 15 others who did not answer the education question.

Source: Western Analysis, Inc.





TABLE 3-4  
DISTRIBUTION OF RESPONDENTS BY ANNUAL  
HOUSEHOLD INCOME IN 1981

	NUMBER <sup>a</sup>	PERCENT
Under \$10,000	118	17
\$10,000 - \$14,999	116	16
\$15,000 - \$19,999	94	13
\$20,000 - \$24,999	133	19
\$25,000 - \$34,999	148	21
\$35,000 or more	102	14
Total	711	100

<sup>a</sup>Excludes 60 people who did not answer any demographic items, and 65 others who did not answer the income question.

Source: Western Analysis, Inc.



TABLE 3-5  
FAMILY STATUS OF RESPONDENTS

	MARRIED	NOT MARRIED <sup>b</sup>	TOTAL SAMPLE <sup>a</sup>
No children	100	131	231
Children all over 20	189	43	232
One or more children under 20	283	30	313
Total	572	204	776

<sup>a</sup>Excludes 60 respondents who did not answer Questions 13 to 19.

<sup>b</sup>Refers to divorced, widowed, and single respondents.

Source: Western Analysis, Inc.



TABLE 3-6  
AGE OF RESPONDENTS BY FAMILY STATUS

	CHILDREN UNDER 20		ALL CHILDREN 20 OR OLDER		NO CHILDREN		TOTAL SAMPLE <sup>a</sup>	
	N	%	N	%	N	%	N	%
17-24	10	3	0	--	38	16	48	6
25-34	99	32	0	--	80	34	179	23
35-44	113	36	7	3	20	9	140	18
45-54	77	24	28	23	16	7	121	16
55-64	14	5	96	41	21	9	131	17
65-74	0	--	70	30	39	17	109	14
75 or older	0	--	31	13	17	7	48	6
Total	313	100	232	100	231	100	776	100

<sup>a</sup>Excludes 60 respondents who did not answer any demographic items.

Source: Western Analysis, Inc.



TABLE 3-7

PERCENT WHO VISITED MISSOURI RIVER AREAS, DURING  
THE PAST TWO YEARS, BY COUNTY OF RESIDENCE

	CASCADE	LEWIS AND CLARK	SILVER BOW	JETTER- SON	BROAD- WATER	TOTAL SAMPLE <sup>a</sup>
Hauser Lake Area	26	74	28	35	24	40
Canyon Ferry	28	82	49	68	88	50
Upper Holter Lake <sup>b</sup>	46	61	24	40	47	45
Holter Lake	58	38	9	24	18	41
Number of Respondents <sup>c</sup>	373	220	151	37	17	810

<sup>a</sup>Includes 12 respondents who did not live in one of the five counties.

<sup>b</sup>Includes Gates of the Mountains.

<sup>c</sup>Number who answered Question 2, about visits to the Hauser Lake area. Three people who answered Question 1, about county of residence, but not Question 2, and 23 people who did not answer either question, are excluded.

Source: Western Analysis, Inc.





TABLE 3-8

NUMBER OF VISITS TO MISSOURI RIVER AREAS,  
DURING THE PAST TWO YEARS, BY COUNTY OF RESIDENCE

<u>Percent Who Visited Twelve or More Times</u>	CASCADE	LEWIS AND CLARK	SILVER BOW	JEFFER- SON	BROAD- WATER	TOTAL SAMPLE <sup>a</sup>
Hauser Lake Area (N)	2 ( 89)	34 (159)	11 (44)	0 (13)	0 ( 3)	20 (310)
Canyon Ferry (N)	2 (103)	37 (170)	10 (69)	17 (24)	67 (12)	22 (384)
Upper Holter <sup>b</sup> (N)	4 (166)	7 (133)	3 (37)	7 (14)	5 ( 7)	5 (358)
Holter Lake (N)	20 (210)	11 ( 82)	7 (15)	0 ( 9)	0 ( 2)	16 (321)
<u>Percent Who Visited Once<sup>c</sup></u>						
Hauser Lake Area	34	4	36	15	0	17
Canyon Ferry	43	5	16	25	8	19
Upper Holter <sup>b</sup>	43	29	60	79	71	41
Holter Lake	18	32	33	56	100	24

<sup>a</sup>Includes respondents who did not live in one of the five counties.

<sup>b</sup>Includes Cates of the Mountains.

<sup>c</sup>The base (N) for these percentages is the total number of visitors to the area. It is the same as the base (N) for Percent Who Visited Twelve Times or More.

Source: Western Analysis, Inc.



TABLE 3-9

LENGTH OF USUAL AND LONGEST VISITS TO MISSOURI RIVER AREAS,  
BY COUNTY OF RESIDENCE

Cascade County Residents: Percent	USUAL VISIT				LONGEST VISIT			
	Hauser Lake	Canyon Ferry	Upper Holter	Holter Lake	Hauser Lake	Canyon Ferry	Upper Holter	Holter Lake
8 hours or less	44	39	61	47	35	34	54	31
One day	15	24	23	28	19	13	20	25
Two days	32	27	12	15	23	33	14	22
Three days or more	9	10	4	10	23	12	12	22
Total (N)	100 ( 95)	100 (104)	100 (171)	100 (216)	100 ( 95)	100 (103)	100 (169)	100 (214)

Lewis & Clark County  
Residents: Percent

8 hours or less	79	73	73	81	53	50	67	73
One day	14	15	17	11	22	21	17	13
Two days	2	7	7	7	12	14	8	10
Three days or more	5	5	3	1	13	14	8	4
Total (N)	100 (160)	100 (176)	100 (132)	100 ( 83)	100 (160)	100 (174)	100 (131)	100 ( 84)



TABLE 3-9 (continued)

LENGTH OF USUAL AND LONGEST VISITS TO MISSOURI RIVER AREAS,  
BY COUNTY OF RESIDENCE

Silver Bow County Residents: Percent	USUAL VISIT				LONGEST VISIT			
	Hauser Lake	Canyon Ferry	Upper Holter	Holter Lake	Hauser Lake	Canyon Ferry	Upper Holter	Holter Lake
8 hours or less	36	26	51	20	23	26	54	20
One day	31	27	32	33	30	18	32	33
Two days	27	39	11	20	23	35	5	20
Three days or more	6	8	6	27	24	21	9	27
Total (N)	100 ( 45)	100 ( 74)	100 ( 37)	100 ( 15)	100 ( 44)	100 ( 74)	100 ( 37)	100 ( 15)
All Respondents <sup>a</sup>								
Percent:								
8 hours or less	61	54	66	42	43	40	60	42
One day	17	20	21	22	23	19	20	22
Two days	15	19	9	19	17	24	11	19
Three days or more	6	7	4	17	17	17	9	17
Total (N)	100 (318)	100 (397)	100 (363)	100 (328)	100 (317)	100 (394)	100 (359)	100 (329)

<sup>a</sup>Includes residents of Jefferson, Broadwater, and other counties.

Source: Western Analysis, Inc.



TABLE 3-10

LOCATION OF PROPERTY OWNED OR LEASED BY RESPONDENTS,  
BY COUNTY OF RESIDENCE

	CASCADE	LEWIS AND CLARK	SILVER BOW	JEFFER- SON	BROAD- WATER	TOTAL SAMPLE <sup>a</sup>
Hauser Lake Area	4	8	1	0	0	13
Canyon Ferry	4	23	3	1	0	31
Upper Holter Lake	1	1	0	0	0	2
Holter Lake	7	0	0	0	0	7
Other <sup>b</sup>	1	1	0	0	2	4
Total	17	33	4	1	2	57

<sup>a</sup>Does not include one cabin owner who was not a resident of the five-county area at the time of the survey.

<sup>b</sup>Respondent checked "other" and wrote "Missouri River" in the space provided.

Source: Western Analysis, Inc.





TABLE 3-11

PERCENT WHO VISITED MISSOURI RIVER AREAS, DURING THE PAST TWO YEARS,  
BY ANNUAL HOUSEHOLD INCOME, EDUCATION, AGE, SEX, AND FAMILY STATUS

<u>Annual Household Income</u>	HAUSER LAKE AREA	CANYON FERRY	UPPER HOLTER LAKE	HOLTER LAKE	(N) <sup>a</sup>
Under \$10,000	21	31	27	23	(118)
\$10,000 - \$14,999	38	49	47	40	(114)
\$15,000 - \$19,999	52	56	51	47	( 94)
\$20,000 - \$24,999	38	53	48	47	(133)
\$25,000 - \$34,999	52	65	56	49	(148)
\$35,000 or more	51	62	57	52	(102)
<u>Education</u>					
Not a high school graduate	25	40	25	32	( 97)
High school graduate	39	46	41	42	(181)
Some college	40	50	48	40	(233)
College graduate	49	66	59	53	(122)
Postgraduate, professional training	50	58	56	47	(125)
<u>Age</u>					
17-24	38	56	56	42	( 48)
25-34	50	62	55	56	(179)
35-44	47	59	54	46	(140)
45-54	48	52	50	48	(122)
55-64	33	47	43	36	(131)
65-74	24	35	27	23	(107)
75 and older	22	25	18	22	( 49)
<u>Family Status</u>					
Children under 20	48	58	54	52	(313)
Children over 20	32	42	34	31	(232)
No children	38	45	48	40	(231)
<u>Total Sample</u> <sup>b</sup>	40	50	45	41	(818)

<sup>a</sup>Does not include respondents who did not answer demographic questions.

<sup>b</sup>Includes respondents who did not answer demographic questions, but excludes those who did not answer Question 2, about visits to the Hauser Lake area.

Source: Western Analysis, Inc.



TABLE 3-12

ACTIVITIES REPORTED FOR GENERAL MISSOURI RIVER AREA,  
BY NUMBER OF VISITS FOR THE ACTIVITY DURING THE PAST TWO YEARS

Activity <sup>a</sup>	NUMBER OF VISITS (PERCENT)						Total Sample <sup>b</sup>
	None	One	Two or Three	Four or Five	Six to Eleven	Twelve or More	
* Fishing from shore	31	7	15	8	14	24	99
* Fishing from a boat	49	7	12	10	11	11	100
* Ice fishing	73	3	8	5	7	5	101
* Water skiing	74	6	8	3	4	6	101
* Boating (other)	70	7	10	4	4	5	100
* Swimming	70	4	9	4	7	6	100
Sailing	95	+	2	+	2	+	100
River floating	86	3	6	2	2	2	100
* Picnicking	52	10	16	8	8	6	100
* Sightseeing	65	7	12	5	6	4	99
Motorcycle riding	94	1	2	1	1	1	100
Snowmobiling	98	+	+	+	+	+	100
* Camping with RV	75	5	6	4	5	5	100
Camping without RV	85	3	4	3	3	1	99
Backpacking	95	2	1	1	+	+	100
* Walking or hiking	82	4	7	2	3	2	100
Prospecting	93	2	2	1	1	1	100
* Observing wildlife	83	3	5	3	3	4	101
Hunting	86	2	4	3	3	2	100
Trapping	99	0	0	0	0	+	100
Other	98	+	+	+	+	+	100

\* Reported by more than 15 percent of respondents.

<sup>a</sup> See questionnaire in Appendix A for exact wording of Question 7.

<sup>b</sup> Number of cases is approximately 546 for each activity. Respondents who had not visited any of the Missouri River areas in the past two years or who did not answer Question 7 are excluded. (Total may not equal 100 due to rounding.)

Source: Western Analysis, Inc.



TABLE 3-13

PERCENT OF PARTICIPANTS WHO VISITED MISSOURI RIVER AREAS<sup>a</sup>  
FOR EACH OF THE ELEVEN MOST POPULAR ACTIVITIES

	HAUSER LAKE AREA	CANYON FERRY	UPPER HOLTER LAKE <sup>c</sup>	HOLTER LAKE	ALL AREAS	(N) <sup>b</sup>
Fishing from shore	31	27	5	37	100	(385)
Fishing from a boat	21	39	7	33	100	(287)
Ice fishing	20	41	2	36	99	(152)
Water skiing	20	44	12	23	99	(142)
Boating (other)	21	40	23	16	100	(160)
Swimming	22	53	8	17	100	(169)
Picnicking	21	35	16	28	100	(249)
Sightseeing	19	24	34	23	100	(178)
Camping with RV	19	43	4	34	100	(149)
Walking or hiking	20	24	30	27	100	( 97)
Observing wildlife	22	30	24	24	100	( 87)

<sup>a</sup>Area visited was the map location marked by the respondent (see Question 9). If locations in more than one general area were marked for the same activity, the Hauser Lake area was coded in preference to any of the others, and Canyon Ferry was coded in preference to Holter Lake or Upper Holter Lake. If the respondent did not mark the map, the area written in as an answer to Question 8 was coded, in the same order of preference as the map entries. Most respondents indicated only one general area for each activity.

<sup>b</sup>Number of participants was determined by the number who indicated an area visited for the activity. It does not always correspond exactly to the number who indicated how many visits they had made for each activity, due to respondents' inconsistency.

<sup>c</sup>Includes Gates of the Mountains.

Source: Western Analysis, Inc.



TABLE 3-14

PERCENT OF PARTICIPANTS WHO VISITED MISSOURI RIVER AREAS,  
BY COUNTY OF RESIDENCE

ACTIVITY	CASCADE	LEWIS AND CLARK	SILVER BOW	JEFFER- SON	BROAD- WATER	TOTAL SAMPLE <sup>a</sup>
<u>Fishing from Shore</u>						
Hauser Lake area	8	61	26	35	0	31
Canyon Ferry	5	30	66	47	100	27
Upper Holter Lake <sup>b</sup>	6	4	4	0	0	5
Holter Lake	81	5	4	18	0	37
Total	100	100	100	100	100	100
(N)	(164)	(138)	( 50)	( 17)	( 9)	(385)
<u>Fishing from a Boat</u>						
Hauser Lake area	8	39	17	27	0	21
Canyon Ferry	13	48	71	63	100	39
Upper Holter Lake <sup>b</sup>	9	5	7	9	0	7
Holter Lake	69	8	5	0	0	33
Total	99	100	100	99	100	100
(N)	(120)	(102)	( 41)	( 11)	( 8)	(287)
<u>Ice Fishing</u>						
Hauser Lake area	2	43	19	14	0	20
Canyon Ferry	4	52	76	86	100	41
Upper Holter Lake <sup>b</sup>	5	0	0	0	0	2
Holter Lake	89	5	5	0	0	36
Total	100	100	100	100	100	99
(N)	( 57)	( 58)	( 21)	( 7)	( 3)	(152)
<u>Water Skiing</u>						
Hauser Lake area	7	40	17	0	0	20
Canyon Ferry	24	47	75	100	100	44
Upper Holter Lake <sup>b</sup>	17	11	4	0	0	12
Holter Lake	52	2	4	0	0	23
Total	100	100	100	100	100	99
(N)	( 59)	( 53)	( 24)	( 2)	( 3)	(142)





TABLE 3-14 (continued)

PERCENT OF PARTICIPANTS WHO VISITED MISSOURI RIVER AREAS,  
BY COUNTY OF RESIDENCE

ACTIVITY	CASCADE	LEWIS AND CLARK	SILVER BOW	JEFFER- SON	BROAD- WATER	TOTAL SAMPLE <sup>a</sup>
<u>Boating (Other)</u>						
Hauser Lake area	12	31	20	0	0	21
Canyon Ferry	17	46	70	60	100	40
Upper Holter Lake <sup>b</sup>	33	19	10	40	0	23
Holter Lake	33	4	0	0	0	16
Total	100	100	100	100	100	100
(N)	( 60)	( 70)	( 20)	( 5)	( 3)	(160)
<u>Swimming</u>						
Hauser Lake area	12	36	15	0	0	22
Canyon Ferry	20	54	85	100	100	53
Upper Holter Lake <sup>b</sup>	16	6	0	0	0	8
Holter Lake	52	3	0	0	0	17
Total	100	99	100	100	100	100
(N)	( 50)	( 77)	( 26)	( 7)	( 7)	(169)
<u>Picnicking</u>						
Hauser Lake area	4	41	23	0	0	21
Canyon Ferry	10	41	69	77	100	35
Upper Holter Lake <sup>b</sup>	21	16	8	8	0	16
Holter Lake	64	2	0	15	0	28
Total	99	100	100	100	100	100
(N)	( 98)	(100)	( 26)	( 13)	( 6)	(247)
<u>Sightseeing</u>						
Hauser Lake area	7	36	25	0	0	19
Canyon Ferry	5	29	45	62	80	24
Upper Holter Lake <sup>b</sup>	40	32	25	25	20	33
Holter Lake	48	3	5	12	0	23
Total	100	100	100	99	100	99
(N)	( 75)	( 66)	( 20)	( 8)	( 5)	(177)



TABLE 3-14 (continued)  
PERCENT OF PARTICIPANTS WHO VISITED MISSOURI RIVER AREAS,  
BY COUNTY OF RESIDENCE

ACTIVITY	CASCADE	LEWIS AND CLARK	SILVER BOW	JEFFER- SON	BROAD- WATER	TOTAL SAMPLE <sup>a</sup>
<u>Camping with RV</u>						
Hauser Lake area	7	32	32	0	25	19
Canyon Ferry	15	58	68	100	75	43
Upper Holter Lake <sup>b</sup>	6	5	0	0	0	4
Holter Lake	72	5	0	0	0	34
Total	100	100	100	100	100	100
(N)	( 68)	( 38)	( 31)	( 5)	( 4)	(149)
<u>Walking or Hiking</u>						
Hauser Lake area	7	43	17	11	0	20
Canyon Ferry	9	23	58	44	50	24
Upper Holter Lake <sup>b</sup>	30	30	25	33	50	30
Holter Lake	54	3	0	11	0	27
Total	100	99	100	99	100	101
(N)	( 44)	( 30)	( 12)	( 9)	( 2)	( 97)
<u>Observing Wildlife</u>						
Hauser Lake area	7	37	33	17	0	22
Canyon Ferry	3	30	53	50	100	30
Upper Holter Lake <sup>b</sup>	31	30	13	17	0	24
Holter Lake	59	3	0	17	0	23
Total	100	100	99	101	100	99
(N)	( 29)	( 30)	( 15)	( 6)	( 4)	( 86)

<sup>a</sup>Includes respondents who did not live in the five-county area; does not include respondents who did not answer the question about county of residence.

<sup>b</sup>Includes Gates of the Mountains.

Source: Western Analysis, Inc.



TABLE 3-15

PERCENT OF PARTICIPANTS WHO VISITED MISSOURI RIVER AREAS,  
BY AGE GROUP

ACTIVITY	17-24	25-34	35-44	45-54	55-64	65+	TOTAL SAMPLE <sup>a</sup>
<u>Fishing from Shore</u>							
Hauser Lake area	24	34	36	31	20	30	31
Canyon Ferry	33	28	21	19	43	26	27
Upper Holter Lake <sup>b</sup>	0	0	10	10	4	2	5
Holter Lake	43	38	33	40	34	41	37
Total	100	100	100	100	101	99	100
(N)	( 21)	(104)	( 82)	( 74)	( 56)	( 46)	(383)
<u>Fishing from a Boat</u>							
Hauser Lake area	15	24	21	22	14	28	22
Canyon Ferry	38	42	43	29	54	25	39
Upper Holter Lake <sup>b</sup>	0	4	12	11	4	0	7
Holter Lake	46	29	24	38	28	46	32
Total	99	99	100	100	100	99	100
(N)	( 13)	( 78)	( 56)	( 63)	( 44)	( 28)	(282)
<u>Ice Fishing</u>							
Hauser Lake area	--	24	30	20	12	15	20
Canyon Ferry	--	44	33	33	56	35	42
Upper Holter Lake <sup>b</sup>	--	2	7	0	0	0	2
Holter Lake	--	29	30	47	32	50	36
Total	--	99	100	100	100	100	100
(N)	( 5)	( 41)	( 30)	( 30)	( 25)	( 20)	(151)
<u>Water Skiing</u>							
Hauser Lake area	12	24	18	21	--	--	21
Canyon Ferry	62	40	42	41	--	--	44
Upper Holter Lake <sup>b</sup>	0	8	24	17	--	--	12
Holter Lake	25	28	15	21	--	--	23
Total	99	100	99	100	--	--	100
(N)	( 16)	( 50)	( 33)	( 29)	( 9)	( 3)	(140)



TABLE 3-15 (continued)

PERCENT OF PARTICIPANTS WHO VISITED MISSOURI RIVER AREAS,  
BY AGE GROUP

ACTIVITY	17-24	25-34	35-44	45-54	55-64	65+	TOTAL SAMPLE <sup>a</sup>
<u>Boating (Other)</u>							
Hauser Lake area	20	16	21	26	22	---	20
Canyon Ferry	47	43	43	26	43	---	41
Upper Holter Lake <sup>b</sup>	13	25	29	18	26	---	23
Holter Lake	20	16	7	30	9	---	16
Total	100	100	100	100	100	---	100
(N)	( 15)	( 44)	( 42)	( 27)	( 23)	( 7)	(153)
<u>Swimming</u>							
Hauser Lake area	10	25	16	31	31	--	23
Canyon Ferry	68	52	50	47	62	--	53
Upper Holter Lake <sup>b</sup>	5	6	14	6	0	---	8
Holter Lake	16	17	20	16	8	--	17
Total	99	100	100	100	101	---	101
(N)	( 19)	( 48)	( 50)	( 32)	( 13)	( 6)	(168)
<u>Picnicking</u>							
Hauser Lake area	15	25	21	22	11	31	21
Canyon Ferry	38	33	39	27	21	31	35
Upper Holter Lake <sup>b</sup>	12	10	18	27	17	12	16
Holter Lake	35	32	22	24	31	25	28
Total	100	100	100	100	100	99	100
(N)	( 26)	( 72)	( 62)	( 41)	( 29)	( 16)	(246)
<u>Sightseeing</u>							
Hauser Lake area	6	19	23	21	20	21	19
Canyon Ferry	41	19	21	12	40	37	24
Upper Holter Lake <sup>b</sup>	24	23	49	47	25	28	34
Holter Lake	29	40	8	21	15	14	23
Total	100	101	101	101	100	100	100
(N)	( 17)	( 53)	( 39)	( 34)	( 20)	( 14)	(177)





TABLE 3-15 (continued)

PERCENT OF PARTICIPANTS WHO VISITED MISSOURI RIVER AREAS,  
BY AGE GROUP

ACTIVITY	17-24	25-34	35-44	45-54	55-64	65+	TOTAL SAMPLE <sup>a</sup>
<u>Camping with RV</u>							
Hauser Lake area	--	28	19	14	8	13	19
Canyon Ferry	--	33	50	36	62	27	43
Upper Holter Lake <sup>b</sup>	--	0	6	6	8	0	4
Holter Lake	--	34	25	33	23	60	34
Total	--	100	100	99	101	100	100
(N)	( 7)	( 29)	( 36)	( 33)	( 26)	( 15)	(146)
<u>Walking or Hiking</u>							
Hauser Lake area	8	25	20	23	9	--	20
Canyon Ferry	33	17	23	8	54	--	24
Upper Holter Lake <sup>b</sup>	17	22	40	31	18	--	30
Holter Lake	42	25	17	38	18	--	27
Total	100	99	100	100	99	--	101
(N)	( 12)	( 24)	( 30)	( 13)	( 11)	( 7)	( 97)
<u>Observing Wildlife</u>							
Hauser Lake area	--	23	17	23	--	--	22
Canyon Ferry	--	20	26	31	--	--	30
Upper Holter Lake <sup>b</sup>	--	23	39	15	--	--	24
Holter Lake	--	33	17	31	--	--	24
Total	--	99	99	100	--	--	100
(N)	( 6)	( 30)	( 23)	( 13)	( 9)	( 6)	( 87)

<sup>a</sup>Excludes respondents who did not answer the age question.<sup>b</sup>Includes Gates of the Mountains.

Source: Western Analysis, Inc.



TABLE 3-16

PERCENT OF PARTICIPANTS WHO VISITED MISSOURI RIVER AREAS,  
BY FAMILY STATUS

ACTIVITY	CHILDREN UNDER 20	ALL CHILDREN 20 OR OLDER	NO CHILDREN	TOTAL SAMPLE <sup>a</sup>
<u>Fishing from Shore</u>				
Hauser Lake area	34	27	27	31
Canyon Ferry	22	31	33	27
Upper Holter Lake <sup>b</sup>	6	3	3	5
Holter Lake	37	40	37	37
Total	99	101	100	100
(N)	(191)	( 98)	( 96)	(385)
<u>Fishing from a Boat</u>				
Hauser Lake area	20	21	24	21
Canyon Ferry	35	43	44	39
Upper Holter Lake <sup>b</sup>	9	4	4	7
Holter Lake	36	32	28	33
Total	100	100	100	100
(N)	(149)	( 70)	( 68)	(287)
<u>Ice Fishing</u>				
Hauser Lake area	26	17	13	20
Canyon Ferry	34	49	50	41
Upper Holter Lake <sup>b</sup>	1	0	5	2
Holter Lake	38	35	33	36
Total	99	101	101	99
(N)	( 76)	( 37)	( 39)	(152)
<u>Water Skiing</u>				
Hauser Lake area	20	26	19	21
Canyon Ferry	44	33	49	44
Upper Holter Lake <sup>b</sup>	16	7	5	12
Holter Lake	20	33	27	23
Total	100	99	100	100
(N)	( 90)	( 15)	( 37)	(142)



TABLE 3-16 (continued)

PERCENT OF PARTICIPANTS WHO VISITED MISSOURI RIVER AREAS,  
BY FAMILY STATUS

ACTIVITY	CHILDREN UNDER 20	ALL CHILDREN 20 OR OLDER	NO CHILDREN	TOTAL SAMPLE <sup>a</sup>
<u>Boating (Other)</u>				
Hauser Lake area	23	29	11	21
Canyon Ferry	40	32	44	40
Upper Holter Lake <sup>b</sup>	18	21	33	23
Holter Lake	18	18	11	16
Total	99	100	99	100
(N)	( 87)	( 28)	( 45)	(160)
<u>Swimming</u>				
Hauser Lake area	25	25	14	22
Canyon Ferry	48	55	67	53
Upper Holter Lake <sup>b</sup>	9	5	5	8
Holter Lake	18	15	14	17
<u>Picnicking</u>				
Hauser Lake area	21	20	22	21
Canyon Ferry	31	29	46	35
Upper Holter Lake <sup>b</sup>	18	16	13	16
Holter Lake	30	36	19	28
Total	100	101	100	100
(N)	(261)	(132)	(152)	(249)
<u>Sightseeing</u>				
Hauser Lake area	18	25	17	19
Canyon Ferry	17	31	31	24
Upper Holter Lake <sup>b</sup>	40	22	31	34
Holter Lake	24	22	22	23
Total	99	100	101	100
(N)	( 92)	( 32)	( 54)	(178)



TABLE 3-16 (continued)

PERCENT OF PARTICIPANTS WHO VISITED MISSOURI RIVER AREAS,  
BY FAMILY STATUS

ACTIVITY	CHILDREN UNDER 20	ALL CHILDREN 20 OR OLDER	NO CHILDREN	TOTAL SAMPLE <sup>a</sup>
<u>Camping with RV</u>				
Hauser Lake area	24	14	10	19
Canyon Ferry	41	45	45	43
Upper Holter Lake <sup>b</sup>	4	7	0	4
Holter Lake	31	33	45	34
Total	100	99	100	100
(N)	( 78)	( 42)	( 29)	(149)
<u>Walking or Hiking</u>				
Hauser Lake area	13	24	27	20
Canyon Ferry	23	35	13	24
Upper Holter Lake <sup>b</sup>	30	29	30	30
Holter Lake	34	12	24	27
Total	100	100	99	101
(N)	( 47)	( 17)	( 33)	( 97)
<u>Observing Wildlife</u>				
Hauser Lake area	16	31	25	22
Canyon Ferry	23	31	39	30
Upper Holter Lake <sup>b</sup>	35	19	11	24
Total	100	100	100	100
(N)	( 43)	( 16)	( 28)	( 87)

<sup>a</sup>Does not include respondents who did not answer demographic questions.<sup>b</sup>Includes Gates of the Mountains.

Source: Western Analysis, Inc.





TABLE 2-17  
NUMBER OF PARTICIPANTS WHO VISITED SPECIFIC SITES, FOR TWENTY ACTIVITIES

SPECIFIC SITE <sup>a</sup>	Fishing from shore	Fishing from a boat	Ice fishing	Water fishing	Skiing	Other boating	Swimming	Sailing	River floating	Picnicking	Sightseeing	Motor- cycling	Snow- mobiling	Camping with RV	Other camping	Back- packing	Hiking	Prospecting	Observing wildlife	Hunting	Trapping	Other
Hauser Dam	27	1	0	0	0	0	0	0	5	1	1	1	0	0	0	0	0	1	0	2	0	0
Black Sandy or White Sandy	19	23	5	9	5	8	0	0	1	15	4	7	0	13	6	3	3	2	1	2	0	1
Causeway or Lake Helena	17	4	15	0	0	2	3	0	2	1	1	0	0	2	2	0	2	0	4	0	0	0
East side of Hauser Lake	6	8	1	2	5	1	1	0	1	2	5	1	0	2	1	1	2	9	3	2	0	1
below Trout Creek	4	1	0	4	1	1	0	0	0	3	3	0	0	1	2	1	2	1	1	1	0	0
York Bridge																						
Lakeside or West side of Hauser Lake to York Bridge	9	8	1	7	7	11	0	0	0	5	2	1	2	3	1	0	0	0	1	0	0	2
West side of Hauser Lake above Lakeside	1	0	0	2	0	0	0	1	0	0	3	0	0	0	0	0	3	1	0	0	0	0
Riverside or East side of Hauser Lake to York Bridge	12	4	0	0	5	3	0	0	2	11	6	2	1	4	2	0	2	3	2	0	0	0
Hauser Lake Area, unspecified	23	12	9	5	8	11	0	0	5	14	9	0	0	3	2	1	5	7	7	3	1	1
Total for Hauser Lake Area	118	61	31	29	33	33	2	2	16	52	34	12	3	28	16	6	19	24	19	10	1	5
Cave Day area	11	15	1	13	8	10	2	0	0	9	4	1	0	9	3	1	4	1	1	0	0	2
Maple Gulch to Helligate	13	16	0	13	10	22	4	2	2	14	5	3	0	11	3	0	5	3	5	3	0	2
Confederate Gulch to Townsend	6	4	2	2	4	7	1	1	1	7	8	0	1	2	1	0	3	1	2	7	0	1
Yacht Basin or Northwest side of Canyon Ferry Lake to dam	14	21	4	7	6	6	2	1	10	3	1	0	0	3	1	0	0	0	0	0	0	2
West side of Canyon Ferry Lake above Yacht Basin to Lewis and Clark County line	4	7	3	7	12	17	3	1	9	1	1	2	0	0	0	0	1	0	2	1	0	0
White Earth or Area immediately north	1	10	8	6	3	0	3	0	1	0	1	0	1	0	5	1	0	0	0	0	0	0
Silos	17	6	23	4	3	2	0	0	4	1	1	0	0	3	3	0	0	0	2	0	0	0



TABLE 3-17 (continued)

## NUMBER OF PARTICIPANTS WHO VISITED SPECIFIC SITES, FOR TWENTY ACTIVITIES

SPECIFIC SITE <sup>a</sup>	Fishing from Shore	Fishing from a Boat	Ice Fishing	Water Skiing	Other Boating	Swimming	Sailing	River Floating	Picnicking	Sightseeing	Motor- cycling	Snow- mobiling	Camping with RV	Other Camping	Back- packing	Hiking	Prospecting	Observing Wildlife	Hunting	Trapping	Other
West side of Canyon Ferry Lake, Slits to Townsend Canyon Ferry, not specified	4	0	2	0	1	0	1	1	2	0	0	0	0	2	0	0	0	3	6	0	0
Total for Canyon Ferry	105	112	63	63	64	90	23	14	87	43	14	2	64	22	6	23	11	26	28	2	10
Hausner Dam to Upper Holter Lake	4	1	0	0	0	1	0	2	2	1	0	0	1	1	0	3	0	1	0	0	0
Upper Holter Lake	9	8	2	7	11	6	0	5	12	21	0	0	2	3	2	9	1	6	6	0	1
Gates of the Mountains	3	8	1	4	21	5	0	7	25	37	2	1	2	8	7	17	0	11	6	0	2
Gates of the Mountains to Holter Lake (Oxbow)	2	3	0	6	5	1	0	0	1	1	0	0	1	2	0	0	0	3	3	0	0
Total for Upper Holter Lake	18	20	3	17	37	13	0	14	40	80	2	1	6	14	9	29	1	21	15	0	3
Log Gulch or Departure Point Juniper, or West side of Holter Lake to Holter Lake Campground	16	18	6	6	4	6	0	1	9	4	1	0	9	3	0	2	0	1	1	0	0
Holter Lake Campground, Holter Lake Lodge	18	8	14	5	2	4	1	4	12	7	1	0	8	8	1	3	1	2	2	0	0
Holter Dam	38	6	5	1	0	1	0	3	6	2	0	0	1	2	0	1	0	3	0	0	0
West Side of Holter Lake	2	5	1	4	4	3	0	1	5	5	0	0	3	2	0	3	0	2	1	0	0
Holter Lake, unspecified	44	43	18	15	13	7	2	11	27	18	3	4	24	6	4	16	2	10	15	2	0
Total for Holter Lake	145	94	55	33	26	28	3	21	71	42	6	4	52	26	6	26	3	24	26	2	0

<sup>a</sup>When two or more of the sites indicated in Figure 2-1 are combined, the first named was mentioned more often than the other(s).<sup>b</sup>"Other" includes eight references to visiting friends or relatives and twenty-three miscellaneous references.

Source: Western Analysis, Inc.



TABLE 3-18

PERCENT WHO RATED HAUSER LAKE AREA FACILITIES  
AS NEEDING IMPROVEMENT, BY COUNTY OF RESIDENCE

	CASCADE	LEWIS AND CLARK	SILVER BOW	TOTAL <sup>a</sup>
Picnic Areas	15	25	18	21
Campgrounds	25	33	23	28
Boat Docks or Marinas	31	18	4	19
Swimming Beaches	12	16	9	14
Fishing Access	10	10	4	9
Trails	8	12	0	9
Parking	25	24	18	22
Restrooms	31	33	45	33
Interpretive Exhibits	10	8	4	8
(Number Who Rated Facilities)	(48)	(121)	(22)	(204)

<sup>a</sup>Totals include responses from two residents of Broadwater County, nine residents of Jefferson County, and two residents of other counties in Montana.

Source: Western Analysis, Inc.



TABLE 3-19

NUMBER WHO RATED FACILITIES IN HAUSER LAKE AREA  
AS NEEDING IMPROVEMENT, BY SPECIFIC SITE

	HAUSER DAM	BLACK SANDY S.R.A.	LAKE HELENA	RIVER- SIDE	OTHER <sup>a</sup>	SITE NOT SPECIFIED	TOTAL <sup>b</sup>
Picnic Areas	2	19	1	2	1	17	42
Campgrounds	1	28	0	3	3	24	59
Boat Docks	0	18	2	2	1	15	38
Swimming Beaches	1	9	1	2	1	14	28
Fishing Access	0	4	1	1	2	11	19
Trails	0	6	0	0	2	11	19
Parking	6	16	1	3	1	18	45
Restrooms	1	23	1	5	4	34	68
Interpretive Exhibits	0	6	0	1	0	10	17

<sup>a</sup>Includes Lakeside, other areas above York Bridge, and the east side of the lake below York Bridge.

<sup>b</sup>Includes all respondents who wrote "4" or "5" in the Rating column for a given facility. This total is the numerator for calculating the percentages in Table 3-18. The denominator, or base, is the 204 respondents who answered Questions 11-12.

Source: Western Analysis, Inc.





TABLE 3-20

FAVORITE OUTDOOR RECREATIONAL ACTIVITIES:<sup>a</sup>  
PERCENT PARTICIPATING IN EACH ACTIVITY, BY FAMILY STATUS

	CHILDREN UNDER 20	CHILDREN OVER 20	NO CHILDREN	TOTAL
Fishing from Shore	65	64	56	62
Fishing from Boat	53	43	39	47
Ice Fishing	26	22	25	25
Water Skiing	32	14	26	26
Boating (Other)	28	17	23	24
Swimming	40	18	24	30
Sailing	4	3	9	5
River Floating	22	7	23	18
Picnicking	43	28	32	36
Sightseeing	31	18	26	26
Motorcycle Riding	12	3	10	9
Snowmobiling	8	4	10	8
Camping with RV	39	30	20	32
Camping without RV	25	7	28	21
Backpacking	14	4	20	13
Walking or Hiking	26	19	25	24
Prospecting	9	7	5	8
Observing Wildlife	15	11	4	14
Hunting	42	23	25	32
Trapping	2	1	2	2
Other <sup>b</sup>	12	32	45	29
(Number Responding to Question 20)	(285)	(166)	(164)	(615)

<sup>a</sup>Question 20 referred to "favorite outdoor recreational activities" of the family, without restriction as to the location. The list in Question 20 is identical to the list in the questions that referred to recreation in the Missouri River areas.

<sup>b</sup> Skiing was written in more than any other single activity.

Source: Western Analysis, Inc.



## REFERENCES



## REFERENCES

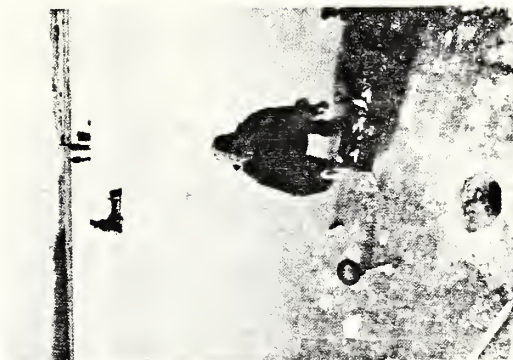
- Dillman, D.A. 1978. Mail and Telephone Surveys. New York: John Wiley.
- Mountain Bell Telephone Company. 1982. Demographic information on telephone customers. Unpublished.
- Pacini, Paul. 1982. Outdoor Recreation Planner, Montana Department of Fish, Wildlife and Parks. Personal communication.
- Wallwork, Susan S. et al. 1980. Montana Outdoor Recreation Survey. Bureau of Business and Economic Research, University of Montana, Missoula.



APPENDIX A  
MISSOURI RIVER RECREATION SURVEY







#### MISSOURI RIVER RECREATION SURVEY

Most of the questions in this booklet refer to the Missouri River and the reservoirs between Townsend and Holter Dam (near the town of Wolf Creek). This stretch of river is shown on the enclosed map. It includes Canyon Ferry Lake, the Hauser Lake area, upper Holter Lake, and Holter Lake, as well as the river between the lakes.

Particular attention is focussed on the Hauser Lake area, which includes the lake itself — Hauser Dam, Black Sandy, Lakeside, and Riverside — and the Causeway, Lake Helena, and the Missouri River between Hauser Dam and Upper Holter Lake. This area is enclosed in a red line on the map.



(61)

1. Please indicate the county in which your permanent, year-round residence is located. (Circle number)

- 1 Broadwater 4 Lewis and Clark  
2 Cascade 5 Silver Bow  
3 Jefferson 6 Other \_\_\_\_\_  
(write in county and state)

(7)

2. In the past two years, did you or anyone in your immediate family visit the Hauser Lake area? (See boxed area on map.) (Circle number. If yes, answer the questions in the box.)

- 1 No

- 2 Yes

(9-10)

(11-12)

(13)

(14-15)

Number of visits \_\_\_\_\_  
How long did you usually stay?  
\_\_\_\_\_ hours or \_\_\_\_\_ days  
How many people were usually in your group? \_\_\_\_\_  
How long was your longest visit?  
\_\_\_\_\_ hours or \_\_\_\_\_ days

(8)

3. In the past two years, did you or anyone in your immediate family visit Canyon Ferry Lake? (Circle number. If yes, answer the questions in the box.)

- 1 No

- 2 Yes

(17-18)

(19-20)

(21-22)

Number of visits \_\_\_\_\_  
How long did you usually stay?  
\_\_\_\_\_ hours or \_\_\_\_\_ days  
How long was your longest visit?  
\_\_\_\_\_ hours or \_\_\_\_\_ days

(16)

4. In the past two years, did you or anyone in your immediate family visit Upper Holter Lake or the Gates of the Mountains area? (Circle number. If yes, answer the questions in the box.)

- 1 No

- 2 Yes

(24-25)

(26-27)

(28-29)

Number of visits \_\_\_\_\_  
How long did you usually stay?  
\_\_\_\_\_ hours or \_\_\_\_\_ days  
How long was your longest visit?  
\_\_\_\_\_ hours or \_\_\_\_\_ days

(23)

5. In the past two years, did you or anyone in your immediate family visit Holter Lake? (Circle number. If yes, answer the questions in the box.)

- 1 No

- 2 Yes

(31-32)

(33-34)

(35-36)

Number of visits \_\_\_\_\_  
How long did you usually stay?  
\_\_\_\_\_ hours or \_\_\_\_\_ days  
How long was your longest visit?  
\_\_\_\_\_ hours or \_\_\_\_\_ days

(30)

6. Do you, or does anyone in your family, own or lease a cabin or land on or near the Missouri River between Townsend and Holter Dam? (Circle number. If yes, answer the questions in the box.)

- 1 No

- 2 Yes

(37)

(38)

(39)

Please indicate the location of your family's cabin or land (Circle number)  
1 Canyon Ferry Lake 4 Holter Lake  
2 Hauser Lake area 5 Other (write in): \_\_\_\_\_  
3 Upper Holter Lake  
Is this your permanent residence?  
(Circle number)  
1 No  
2 Yes



7. When you visited the Missouri River or one of the lakes, what did you usually do?

Please circle the number or numbers that correspond to your primary activities at or near the river, and write in the number of times you went to the area for that purpose, during the past two years.

ACTIVITY	NUMBER OF TIMES IN PAST TWO YEARS
1 Fishing from shore or dock	(40-41)
2 Fishing from a boat	(42-43)
3 Ice fishing	(44-45)
4 Water skiing	(46-47)
5 Boating (other than for fishing or water skiing)	(48-49)
6 Swimming	(50-51)
7 Sailing	(52-53)
8 River floating or kayaking	(54-55)
9 Picnicking	(56-57)
10 Sightseeing	(58-59)
11 Motorcycle riding	(60-61)
12 Snowmobiling	(62-63)
13 Camping with a recreational vehicle	(64-65)
14 Camping without a recreational vehicle	(66-67)
15 Backpacking	(68-69)
16 Walking or hiking	(70-71)
17 Prospecting or rock hunting	(72-73)
18 Observing birds or wildlife	(74-75)
19 Hunting	(76-77)
20 Trapping	(78-79)
21 Other:	(7-8)
	(9-10)

8. Where did you usually go for these activities?

For each of the activities you marked in Question 7, tell us the general area you usually visited for that purpose by writing in one of the following:

Canyon Ferry Lake  
Hauser Lake area  
Upper Holter Lake  
Holter Lake  
Other (please specify)

ACTIVITY	GENERAL AREA
1 Fishing from shore or dock	(11-12)
2 Fishing from a boat	(13-14)
3 Ice fishing	(15-16)
4 Water skiing	(17-18)
5 Boating (other than for fishing or water skiing)	(19-20)
6 Swimming	(21-22)
7 Sailing	(23-24)
8 River floating or kayaking	(25-26)
9 Picnicking	(27-28)
10 Sightseeing	(29-30)
11 Motorcycle riding	(31-32)
12 Snowmobiling	(33-34)
13 Camping with a recreational vehicle	(35-36)
14 Camping without a recreational vehicle	(37-38)
15 Backpacking	(39-40)
16 Walking or hiking	(41-42)
17 Prospecting or rock hunting	(43-44)
18 Observing birds or wildlife	45-46)
19 Hunting	(47-48)
20 Trapping	(49-50)
21 Other:	(51-52)
	(53-54)



9. Now, please use the enclosed map to tell us more exactly where you usually went for each activity. Mark the location you visited **most often**, for each activity, by writing in the corresponding number from Question 7.

*For example, if you usually fished the Missouri River at Beaver Creek, write a 1 on the map where Beaver Creek runs into the Missouri River. If you usually water skied from Cave Bay on Canyon Ferry Lake, write a 4 on the map near Cave Bay.*

10. When you visit the river, do you prefer to go to a developed site, such as a campground or a marina, or to an undeveloped site? (Circle number)

(55)

1 Prefer a developed site  
2 Prefer an undeveloped site  
3 No preference — both developed and undeveloped sites are acceptable

Questions 11 and 12 ask specifically about the Hauser Lake area (the boxed area on the map). If you have never been to this area, skip to Question 13.

11. How would you rate the existing facilities in the Hauser Lake area? (Use a scale from 1 to 5, where 1 is Outstanding, 3 is Adequate, and 5 is Poor, to rate each of the facilities listed on the next page.)

12. For each facility you rated 4 or 5, write in the **specific location** (such as Black Sandy or Riverside) where you think improvement is most needed.

FACILITY	RATING (Question 11)	SPECIFIC LOCATION WHERE IMPROVEMENT IS MOST NEEDED (Question 12)
Picnic areas	_____	_____ (56-57)
Campgrounds	_____	_____ (58-59)
Boat docks or marinas	_____	_____ (60-61)
Swimming beaches	_____	_____ (62-63)
Fishing access	_____	_____ (64-65)
Trails	_____	_____ (66-67)
Parking	_____	_____ (68-69)
Restrooms	_____	_____ (70-71)
Interpretive exhibits	_____	_____ (72-73)
Other: _____	_____	_____ (74-75)
Other: _____	_____	_____ (76-77)

Please use the space below to comment on the management of the Hauser Lake area:







The following information about yourself is needed for statistical purposes.

13. Your age \_\_\_\_\_ (7-8)
14. Your sex: (circle number) 1 Male 2 Female (9-10)
15. Your marital status: (circle number): 1 Married 2 Not married (11)
16. Number of children \_\_\_\_\_ (12)
17. Ages of children \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ (13-24)
18. Annual income of your household in 1981, before taxes (circle number):  
1 Under \$10,000 4 \$20,000-24,999 (25)  
2 \$10,000-14,999 5 \$25,000-34,999  
3 \$15,000-19,999 6 \$35,000 or more

19. Education: Please circle the number corresponding to the level you completed. If you are married, also circle the number corresponding to the level your spouse completed.

	YOURSELF	SPOUSE
(26, 27)	1	1
8th grade or less	2	2
Some high school	3	3
High school graduate	4	4
Some college or vocational training	5	5
College graduate	6	6
Postgraduate or professional training		

20. What are your family's favorite outdoor recreational activities?

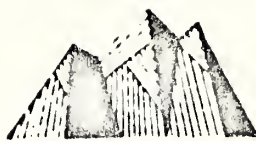
Circle the number corresponding to each of your family's favorite activities. Then write in the general area you or your family visited most often in the past two years for that purpose. (Examples might be Glacier Park for camping, Sun River for hunting, or Big Hole River for fishing.)

ACTIVITY	GENERAL AREA
1 Fishing from shore or dock (28-29)	_____
2 Fishing from a boat (30-31)	_____
3 Ice fishing (32-33)	_____
4 Water skiing (34-35)	_____
5 Boating (other than for fishing or water skiing) (36-37)	_____
6 Swimming (38-39)	_____
7 Sailing (40-41)	_____
8 River floating or kayaking (42-43)	_____
9 Picnicking (44-45)	_____
10 Sightseeing (46-47)	_____
11 Motorcycle riding (48-49)	_____
12 Snowmobiling (50-51)	_____
13 Camping with a recreational vehicle (52-53)	_____
14 Camping without a recreational vehicle (54-55)	_____
15 Backpacking (56-57)	_____
16 Walking or hiking (58-59)	_____
17 Prospecting or rock hunting (60-61)	_____
18 Observing birds or wildlife (62-63)	_____
19 Hunting (64-65)	_____
20 Trapping (66-67)	_____
21 Other: _____ (68-69)	_____ (70-71)



APPENDIX B  
COVER LETTERS





**MONTANA SURVEY CENTER**  
Division of Western Analysis Inc

Dear Montana Resident,

The Montana Survey Center, a division of Western Analysis, Inc., in Helena, is conducting a study of recreational activities on or near the Missouri River between Townsend and Holter Dam. The purpose of the study is to collect accurate information about what people do when they visit the river, where they come from, and how many of them visit various locations along the river and on its reservoirs.

This recreation study is commissioned by the Montana Power Company. It is one of several environmental and engineering studies being carried out to evaluate the feasibility of increasing generating capacity at Hauser Dam.

Your name was drawn in a random sample of residents of the area nearest this stretch of the Missouri River. Questionnaires have been sent to approximately 2,000 households in Broadwater, Cascade, Jefferson, Lewis and Clark, and Silver Bow counties.

Even if you have never been to the Missouri River, we ask that you complete as much of the questionnaire as you can -- Questions 1 through 6 and 13 through 20 -- and return it to us. This will enable us to find out what proportion of nearby residents have not recently used the river for recreational purposes. If you have visited the river, between Townsend and Holter Dam, please complete the entire questionnaire and return it to us. Be sure to mark and return the map of the area, which is folded inside the questionnaire. A postage-paid return envelope is enclosed.

By providing this information about yourself and your recreational activities, you will help us form an accurate picture of current use of the Missouri River and its reservoirs, in the heavily-used stretch between Townsend and Holter Dam.

All information will be kept confidential. Your questionnaire will be identified only by its number, and your answers will be pooled with those of other people in the sample and used to generate numerical information only.

Very truly yours,

Richard L. Bourke  
President





**MONTANA SURVEY CENTER**  
Division of Western Analysis Inc.

June 1, 1982

Dear Montana Resident:

Two weeks ago we wrote to you about our study of recreation on the Missouri River, asking you to fill out a questionnaire. If you have not yet returned your completed questionnaire, please do so as soon as possible.

The purpose of this study is to collect accurate information about the number of people who visit the river and what they do there. We have received a large number of completed questionnaires from residents in the area, but not enough to be sure we can describe recreational use of the river adequately. Each individual's response is very important.

Even if you have never been to the Missouri River, we ask that you complete as much of the questionnaire as you can -- Questions 1 through 6 and 13 through 20 -- and return it to us. This will let us know what proportion of nearby residents have not recently used the river for recreational purposes. If you have visited the river, between Townsend and Holter Dam, please complete the entire questionnaire and return it to us. Be sure to mark and return the map of the area, which is folded inside the questionnaire. A postage-paid return envelope is enclosed.

By providing this information about yourself and your recreational activities, you will help us form an accurate picture of current use of the Missouri River and its reservoirs, in the heavily-used stretch between Townsend and Holter Dam. All information will be kept confidential.

Your contribution to the success of this study will be greatly appreciated.

Very truly yours,

Richard L. Bourke  
President  
WESTERN ANALYSIS, INC.

RLB:mlh







